What is Claimed is:

1.   A plurality of genes, each of whom is differentially expressed in kidney cells exposed to estrogen and/or other hormones or combination of hormones and kidney

5   cells without said exposure, which plurality comprises a first group and a second group, wherein each gene in said first group is differentially expressed at a higher level in said kidney cells exposed to estrogen and/or other hormones or combination of hormones than in said kidney cells without said exposure, and wherein each gene in said second group is differentially expressed at a lower level in said kidney cells exposed to

10   estrogen and/or other hormones or combination of hormones than in said kidney cells without said exposure.

2.   The plurality of claim 1, wherein said exposure is *in vivo* or *in vitro*.

3.   The plurality of claim 2, wherein said higher level and said lower level are assessed using a predetermined statistical significance standard based on

15   measurements of expression levels.

4.   The plurality of claim 3, wherein said measurements are obtained using nucleotide arrays or nucleotide filters.

5.   The plurality of claim 4, wherein said first group comprises NTT73 and ABCC3.

20   6.   The plurality of claim 4, wherein said first group comprises CYP7B1.

7.   The plurality of claim 4, wherein said second group comprises BHMT and SAHH.

8.   The plurality of claim 4, wherein said first group comprises Tissue Factor, CYP7B1, BCAT1, STAT5A, and GADD45G, wherein said second group comprises

BHMT.

9.   The plurality of claim 4, wherein said first group comprises CYP7B1, TF, SCYA28, Iga, Vk28, PHD 2, ELF 3, TIM1, STAT5A, COR1, BCAT1, ABCC3, TIM2, NAT6, RGS3, GNBP3, BCL7A, 17βDHH, FYVE ZFP, NTT73, AGPS, TRIM2, HBACH,

5   CIS2, CYP27B1; and STAT5B, wherein said second group comprises SAHH, ADH1A7, RARRES2, and BHMT.

10.   A method for identifying an agent having the biological effect of estrogen and/or other hormones or combination of hormones on gene expression in kidney, wherein said desired effect represents a first plurality of genes differentially expressed

10   at various levels, which method comprises:

exposing, in vivo or in vitro, kidney cells to said agent;

measuring expression levels of a multiplicity of genes in said kidney cells exposed to said agent and kidney cells without said exposure, said multiplicity being greater than said first plurality;

15   determining, using a predetermined statistical significance standard, genes which are differentially expressed in said kidney cells exposed to said agent and said kidney cells without said exposure, said genes constitute a second plurality; and

comparing the expression levels of genes in said second plurality with the expression levels of genes in said first plurality,

20   wherein said agent is identified as having said desired effort if said first and second pluralities are the same and said expression levels in said first and second pluralities are substantially the same.

11.   The method of claim 10, wherein said measuring is performed using

nucleotide arrays or nucleotide filters.

12. The method of claim 11, wherein said comparing is performed using a suitable statistical technique.

13. The method of claim 12, wherein said first plurality is the plurality of any of

5 claims 5-9.

14. The method of claim 11, wherein said first plurality is the plurality of any of claim 5-9.

15. An agent identified by the method of claim 13.

16. An agent identified by the method of claim 14.

10 17. A pharmaceutical composition comprising the agent of claim 15 and a pharmaceutically acceptable excipient.

18. A pharmaceutical composition comprising the agent of claim 16 and a pharmaceutically acceptable excipient.

19. A method for identifying an agent capable of maintaining vascular volume in

15 septic shock, which method comprises:

exposing, *in vivo* or *in vitro*, kidney cells to said agent;

measuring expression levels of NTT73 and ABCC3 in said kidney cells exposed to said agent and kidney cells without said exposure;

comparing the expression levels of NTT73and ABCC3 with the expression levels of

20 genes in the plurality of claim 5,

wherein said agent is identified as capable of maintaining vascular volume in septic shock if said expression levels of NTT73 and ABCC3 are substantially the same as said expression levels of genes in the plurality of claim 5.

20.   A method for identifying an agent capable of enhancing calcium uptake in post-menopausal women, which method comprises:

exposing, *in vivo* or *in vitro*, kidney cells to said agent;

measuring expression levels of CYP7B1 in said kidney cells exposed to said agent

5   and kidney cells without said exposure;

comparing the expression levels of CYP7B1 with the expression levels of genes in the plurality of claim 6,

wherein said agent is identified as capable of enhancing calcium uptake in post-menopausal women if said expression levels of CYP7B1 are substantially the

10   same as said expression levels of genes in the plurality of claim 6.

21.   A method for identifying an agent for treating cardiovascular disorders, which method comprises:

exposing, *in vivo* or *in vitro*, kidney cells to said agent;

measuring expression levels of BHMT and SAHH in said kidney cells exposed to said

15   agent and kidney cells without said exposure;

comparing the expression levels of BHMT and SAHH with the expression levels of genes in the plurality of claim 7,

wherein said agent is identified for treating cardiovascular disorders if said expression levels of BHMT and SAHH are substantially the same as said expression levels of

20   genes in the plurality of claim 7.

22.   The method of claim 19, 20 or 21, wherein said measuring is performed using nucleotide arrays or nucleotide filters.

23.   The method of claim 22, wherein said comparing is performed using a

suitable statistical technique.

24.   An agent identified by the method of claim 21.

25.   An agent identified by the method of claim 22.

26.   A pharmaceutical composition comprising the agent of claim 24 and a

5   pharmaceutically acceptable excipient.

27.   A pharmaceutical composition comprising the agent of claim 25 and a

pharmaceutically acceptable excipient.

28.   A plurality of genes, each of whom is differentially expressed in pituitary cells

exposed to estrogen and/or a hormone or combination of hormones and pituitary cells

10   without said exposure, which plurality comprises a first group and a second group,

wherein each gene in said first group is differentially expressed at a higher level in said

pituitary cells exposed to estrogen and/or other hormones or combination of hormones

than in said pituitary cells without said exposure, wherein each gene in said second

group is differentially expressed at a lower level in said pituitary cells exposed to

15   estrogen and/or other hormones or combination of hormones than in said pituitary cells

without said exposure.

29.   The plurality of claim 28, wherein said exposure is *in vivo* or *in vitro*.

30.   The plurality of claim 29, wherein said higher level and said lower level are

assessed using a predetermined statistical significance standard based on

20   measurements of expression levels.

31.   The plurality of claim 30, wherein said measurements are obtained using

nucleotide arrays or nucleotide filters.

32.   The plurality of claim 31, wherein said first group comprises STAT5B and

GADD45G.

33.   The plurality of claim 31, wherein said first group comprises STAT5B, GADD45G1, and Kallikreins.

34.   The plurality of claim 31, 32 or 33, wherein said second group comprises

5   FSHb.

35.   A method for identifying an agent having a desired effect of estrogen and/or other hormones or combination of hormones on gene expression in pituitary, wherein said desired effect represents a first plurality of genes differentially expressed at various levels, which method comprises:

10   exposing, in vivo or in vitro, pituitary cells to said agent;

measuring expression levels of a multiplicity of genes in said pituitary cells exposed to said agent and pituitary cells without said exposure, said multiplicity being greater than said first plurality;

determining, using a predetermined statistical significance standard, genes which are

15   differentially expressed in said pituitary cells exposed to said agent and said pituitary cells without said exposure, said genes constitute a second plurality; and

comparing the expression levels of genes in said second plurality with the expression levels of genes in said first plurality,

wherein said agent is identified as having said desired effort if said first and second

20   pluralities are the same and said expression levels in said first and second pluralities are substantially the same.

36.   The method of claim 35, wherein said measuring is performed using nucleotide arrays or nucleotide filters.

37.   The method of claim 36, wherein said comparing is performed using a suitable statistical technique.

38.   An agent identified by the method of claim 35.

39.   A pharmaceutical composition comprising the agent of claim 38, and a

5   pharmaceutically acceptable excipient.

40.   A plurality of genes, each of whom is differentially expressed in uterus cells exposed to estrogen and/or a hormone or combination of hormones and uterus cells without said exposure, which plurality comprises a first group and a second group, wherein each gene in said first group is differentially expressed at a higher level in said

10   uterus cells exposed to estrogen and/or other hormones or combination of hormones than in said uterus cells without said exposure, wherein each gene in said second group is differentially expressed at a lower level in said uterus cells exposed to estrogen and/or other hormones or combination of hormones than in said uterus cells without said exposure.

15   41.   The plurality of claim 40, wherein said exposure is *in vivo* or *in vitro*.

42.   The plurality of claim 41, wherein said higher level and said lower level are assessed using a predetermined statistical significance standard based on measurements of expression levels.

43.   The plurality of claim 42, wherein said measurements are obtained using

20   nucleotide arrays or nucleotide filters.

44.   The plurality of claim 43, wherein said first group comprises SFRP4, Deiodinase, type II, Procollagen, type I, alpha 1, vimentin, and IDFBP4.

45.   The plurality of claim 43, wherein said first group comprises AI121305,

ALOX15, BCAT1, SiAMOX, C3, FOS, MAP2k1, CEBPb, and EGR1.

46.   The plurality of claim 43, wherein said first group comprises SFRP4, Deiodinase (type II), Procollagen (ype I, alpha 1) vimentin, IDFBP4, AI121305, ALOX15, BCAT1, SiAMOX, C3, FOS, MAP2k1, CEBPb, and EGR1.

47.   The plurality of claim 43, 44, 45 or 46, wherein said second group comprises CYP1A1.

48.   The plurality of claim 43, 44, 45, or 46, wherein said second group comprises Scavenger receptor.

49.   The plurality of claim 43, 44, 45, or 46, wherein said second group comprises CYP1A1 and Scavenger receptor.

50.   A method for identifying an agent having a desired effect of estrogen and/or other hormone or combination of hormones on gene expression in uterus, wherein said desired effect represents a first plurality of genes differentially expressed at various levels, which method comprises:

exposing, *in vivo* or *in vitro*, uterus cells to said agent;

measuring expression levels of a multiplicity of genes in said uterus cells exposed to said agent and uterus cells without said exposure, said multiplicity being greater than said first plurality;

determining, using a predetermined statistical significance standard, genes which are differentially expressed in said uterus cells exposed to said agent and said uterus cells without said exposure, said genes constitute a second plurality; and

comparing the expression levels of genes in said second plurality with the expression levels of genes in said first plurality,

wherein said agent is identified as having said desired effort if said first and second

pluralities are the same and said expression levels in said first and second pluralities

are substantially the same.

51.   The method of claim 50, wherein said measuring is performed using

5   nucleotide arrays or nucleotide filters.

52.   The method of claim 51, wherein said comparing is performed using a

suitable statistical technique.

53.   An agent identified by the method of claim 50.

54.   A pharmaceutical composition comprising the agent of claim 53, and a

10   pharmaceutically acceptable excipient.

55.   A plurality of genes of any one of claims 1, 28 or 40, wherein said expression

levels are confirmed by real-time PCR.

56.   The method of identifying of any of claims 10, 19, 20, 21, 35 or 50 wherein

said expression levels are confirmed by real-time PCR.

15   57.   A solid substrate comprising the plurality of genes of one of claims 1, 28 or 40.

58.   The solid substrate of claim 55, which is a gene chip.

59.   A kit comprising the plurality of genes of one of claims 1, 28 or 40.